

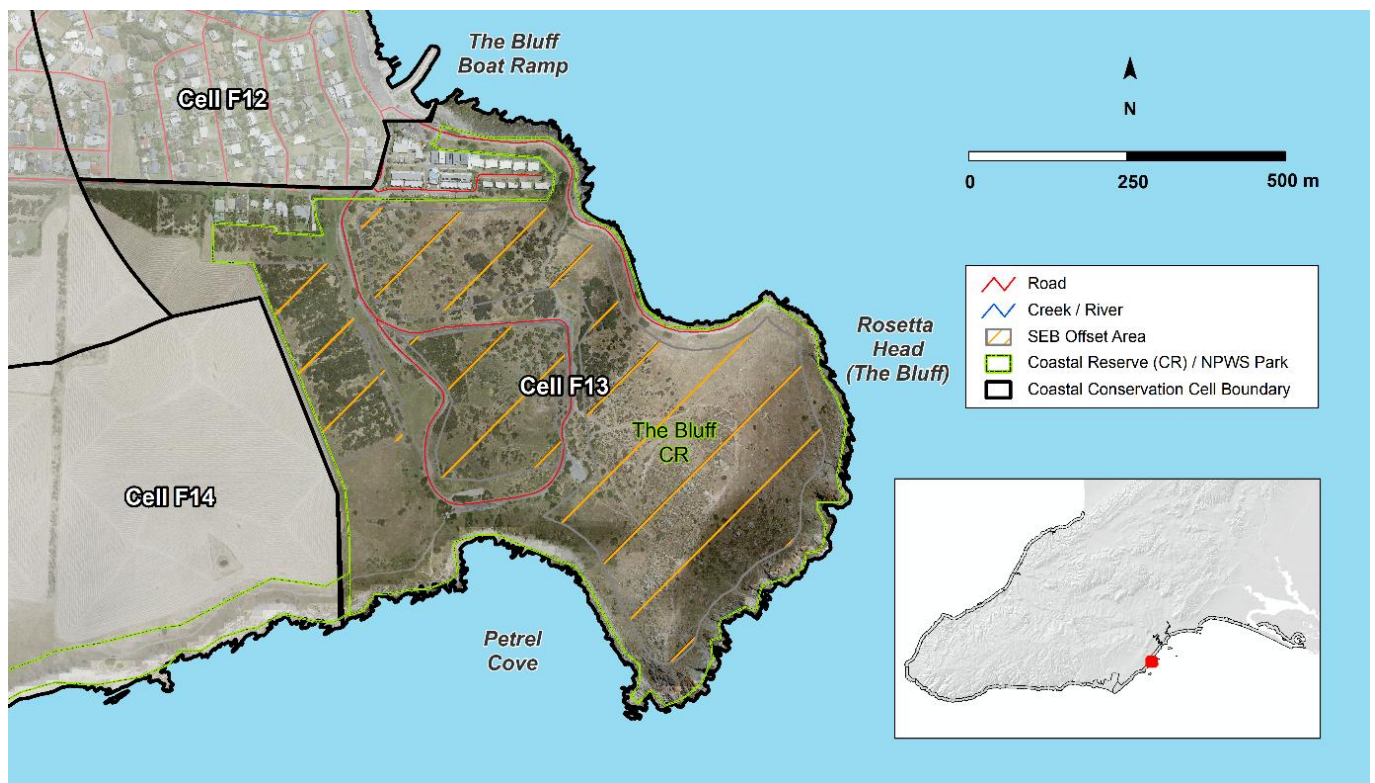
The Bluff (Longkewar)

Cell F13

Overview

This small and compact cell supports a very high visitation rate due to scenic views of Encounter Bay, and the associated islands and local waters. It also supports a wide diversity of remnant vegetation communities. The steep sided bluff contains coastal health species that are associated with the coastal cliffs closer to Newland Head Conservation Park and Waitpinga Cliffs. The variety of landscapes within this cell offer habitats to a range of terrestrial flora and fauna, and

coastal dependent species, particularly seabirds and occasional pelagic visitors. European heritage remains on site mark the beginning of planting of a variety of introduced, non-local and local provenance native coastal species within the cell. Recent Master Plan development by the Council has provided a 20-year plan that attempts to balance the conservation needs with ever increasing visitors and recreational value in this cell.



Cell detail

The cell extends from the boat ramp in Rosetta Harbour to include the headland, The Bluff – also known as Rosetta Head (and associated reserves) – extending approximately 1.5km to the western point of Petrel Cove coastal reserve. The cell is located within the City of Victor Harbor local government area.

Tenure, Land Use and Values

This small cell is entirely coastal recreation reserve under care and control of Council, preserving the scenic amenity of the regionally visible Bluff headland. Since 2012, the waters surrounding The Bluff, and the nearshore marine waters are located within the boundaries of the Encounter Marine Park.

Native title has been determined for Ngarrindjeri people over land and sea Country within this cell under the *Native Title Act 1993 (Cth)*.

A very popular tourist and recreation location where visitors can walk up to the crest of The Bluff from the carpark, to enjoy the view along the coast and, in winter, to observe whales. Other activities in this cell include locals and tourists using the beach and reserve for walking and exercising, sightseeing, fishing, scuba diving and snorkelling, surfing, swimming, boating, meditation and yoga, picnicking, bike riding, stargazing, abseiling, hang gliding and use of remote-control aircraft, photography and education (Jeffrey 2015, City of Victor Harbor 2023). This activity is serviced by three carparks, an interpretative sign, and a rocky loop path to the summit.

Bryars (2013) notes the reefs are important habitat and recreational fishing areas for Southern Rock Lobster (*Jasus edwardsii*) and various fish species. The inshore beaches, seagrasses and reefs are important habitat and recreational fishing areas for species such as Southern Garfish (*Hyporhamphus melanochir*) and King George Whiting (*Sillaginodes punctatus*). The relatively sheltered area in the lee of The Bluff is regionally important as a shore-based recreational diving site.

The Rosetta Head Well and Whaling Station Site (former Encounter Bay Whaling Station) is a designated place of archaeological significance within this cell. Rosetta Head Whaling Station is currently the only whaling site in South Australia that has an associated early whaling ship (the *South Australia*, see shipwreck site in cell F12) whose site has been discovered.

Several coastal community groups are working along the coastal dunes and The Bluff (Victor Harbor Coastcare), undertaking a range of conservation and restoration activities across this cell, including species monitoring, extensive weed control and revegetation, significantly increasing habitats and species diversity values. Friends of the Hooded Plover Fleurieu Peninsula (supported by BirdLife Australia) and Team Oystercatcher volunteers (SA Shorebird Foundation) monitor and raise awareness of beach nesting and shorebird species within the cell.



The Bluff, Granite Island Recreation Park, and Encounter Bay (Coast Protection Board, March 2024)

Landforms

The Bluff (and Wright Island in cell F12) represents the eroded surface of an ancient and extensive granite batholith. Petrel Cove (immediately Southwest of The Bluff) shows exposures of metamorphic contact zone to Kanmantoo Series. The beach at Petrel Cove displays materials weathered materials from the granite, including a heavy minerals suite (Caton et al 2007).

The Bluff is on the Register of the National Estate for its significant geological representation and listed as the Encounter Bay region - Newland Head to Rosetta Head/The Bluff geological monument (reference 1115) displaying the Petrel Cove Formation, Semaphore Sand Member, Encounter Bay Granite, Kanmantoo Group, Balquhidder Formation, Cape Jervis Formation.

The Bluff (Rosetta Head) is listed as a State Heritage place (reference 10353), including the jetty and Whaling Station site, as is the adjoining Rosetta Head Well and Whaling Station site (reference 26454) (former Encounter Bay Whaling Station) and is designated as a place of archaeological significance.

First Nations cultural heritage and connection to land and sea Country

This cell holds high cultural value and significance for the Ramindjeri people of the Ngarrindjeri Nation. It forms part of their Dreaming stories and contains numerous stories, places, and artefacts of cultural importance. Ramindjeri cultural heritage is present throughout the entire cell, everywhere you tread. The Ramindjeri lived, hunted, played, swam, and danced here. Those working within and restoring these areas may encounter artefacts or evidence of cultural significance to the Ramindjeri people and the broader Ngarrindjeri Nation. These areas must be known, recognised, respected, and protected.

Creeks, wetlands, estuaries, dunes, cliff lines, islands and coastal areas are important gathering places that support a variety of habitats and food sources essential for sustaining and protecting Nga:tji. Nga:tji are the personal totems of the Ngarrindjeri people. They embody deep cultural values, symbolising kinship, spiritual protection, and an embedded responsibility to care for the land, waters, and ecosystems they inhabit.

This cell encompasses a range of culturally significant landscape features, including Dreaming and other important sites, traditional camping areas, tools and midden deposits scattered throughout the clifftops and sand dunes. It also contains trade pathways once used by Clan groups, who travelled across the cliff tops toward Kings Head (Kgarakerung). These routes reflect enduring relationships between neighbouring clan groups and the exchange of locally sourced materials such as stone tools, food, and other cultural items.

This cell is also a particularly important site in the Ngurunderi Creation and Dreaming story, which tells of the Ngarrindjeri people's creation of the land and waters, including the River Murray and its mouth, Kandukang (west) and Tapalwora (east). This ancestral narrative extends westward along the southern coast of the Fleurieu Peninsula, encompassing the rugged shoreline, estuaries, and coastal landscapes all the way to Cape Jervis (Parrewar-angk). These areas hold deep cultural and spiritual significance for the Ramindjeri people, with Dreaming tracks, songlines, and important sites embedded throughout the region.

The coastline with its cliffs, beaches, and native vegetation reflects Ngurunderi's journey as he shaped the land, rested at key locations, and followed the tracks of his wives. Cape Jervis (Parrewar-angk) marks an important point in this story, serving as both a physical and spiritual place in the landscape. It connects the mainland to Kangaroo Island (Ngurungai), continuing the cultural narrative of creation, movement, and connection to Country.

Within this cell, the Ngurunderi Dreaming story recounts the formation of Longkewar (The Bluff). While making camp on Kaiki (Granite Island), Ngurunderi saw his wives swimming at Ngarakerung (Kings Beach). In response, he struck the ground with his club, giving rise to Longkewar. His journey from Kaiki continued at Muwerang (Inman River Estuary), from where he walked along the coastline toward Longkewar. Upon reaching its base, he paused to rest and ate mantera bush apples (also known as Muntries (*Kunzea pomifera*)) which grew only in that special place.

Other areas within the cell are also connected to several significant Dreaming and Creation stories, including that of Pungari (Ancestral Seal).

Please respect that cultural concepts and content included in this plan are the Aboriginal Cultural and Intellectual property (ACIP) of the Ramindjeri people of the Ngarrindjeri Nation (provided by Cedric Varcoe, Ramindjeri Cultural Leader living on Country) (cells 1-20). They may not be used or adapted by any other parties without consent.

Terrestrial Biodiversity

Whole cell

The Bluff is one of the City of Victor Harbor's most significant natural reserves, botanically and geologically, with an estimated half of the reserve consisting of remnant vegetation (Jeffery 2015). Covering approximately 45 hectares, with 20 hectares part of a SEB (significant environmental benefit) agreement set aside between 2001- 2010. The Bluff has many native flora species many with high conservation value and threatened species rating and are listed under the *National Parks and Wildlife Act 1972*, with multiple species attracting a high regional conservation listing.

Almost the whole cell demonstrates medium to high conservation values based on priority of vegetation species and the threatened status of the community; priority of the vegetation assemblage based on rarity within South Australia; numbers of endemic plant species that have more than 50% of records within the Southern Fleurieu; significant bird habitat; habitat based on reptile conservation status; European, natural and Aboriginal heritage (Caton et al 2007).

A number of conservation rated species that have been recorded in this cell, including; Eastern Reef Egret (*Egretta sacra*), Peregrine Falcon (*Falco peregrinus macropus*), Common Sandpiper (*Actitis hypoleucos*), Sooty Oystercatcher (*Haematopus fuliginosus fuliginosus*), Elegant Parrot (*Neophema elegans elegans*), Southern Giant Petrel (*Macronectes giganteus*), Crimson Rosella (*Platyercus elegans*), Brown Skua (*Stercorarius antarcticus lonnbergi*), Fairy Tern (*Sternula nereis nereis*), Indian Yellow-nosed Albatross (*Thalassarche carteri*), Shy Albatross (*Thalassarche cauta cauta*), Grey-headed Albatross (*Thalassarche chrysostoma*) and Heath Goanna (*Varanus rosenbergi*).



Crimson Rosella (Platycercus elegans) on flower spike of Yacca (Xanthorrhoea semiplana ssp. semiplana) (D Easton)

Flora species of conservation significance in this cell include Native Orache (*Atriplex australasica*), Dark Flat-sedge (*Cyperus sanguinolentus*), Butterfly Spyridium (*Spyridium coactilifolium*), Hop-bush Wattle (*Acacia dodonaeifolia*), White Correa (*Correa alba* var. *pannosa*), Pale Flax-lily (*Dianella longifolia* var. *grandis*), Pink Gum (*Eucalyptus fasciculosa*) and Wiry Dock (*Rumex dumosus*). The *Lomandra effusa* Tussock Grassland on the northern side of the headland is considered significant, but does not satisfy the criteria under the *Environment Protection and Biodiversity Conservation (EPBC) Act* Critically Endangered listing of an *Iron-grass natural temperate grassland of South Australia* threatened ecological community, as it is located in a coastal area where the floristic composition is influenced by coastal processes (e.g. salt spray and saline soils) (Turner 2012).

Some significant conservation value species that have limited populations across the Fleurieu are well-represented within the reserve, such as White correa (*Correa alba* var. *pannosa*), Twining Glycine (*Glycine rubiginosa*) and Wiry Dock (*Rumex dumosus*). Other species such as Pale Flax-lily (*Dianella longifolia* var. *grandis*), Small-leaved Bluebush (*Maireana brevifolia*), Mealy Saltbush (*Rhagodia parabolica*) and Tall Scurf-pea (*Cullen australasicum*) are present as

single or few plants, (or in the case of Creamy Candles (*Stackhousia monogyna*) a single patch) (Jeffery 2015). Quandong (*Santalum acuminatum*) is present in a single stand, parasitising on Swamp Sheoak (*Casuarina obesa*), as well as Seaberry Saltbush (*Rhagodia candolleana ssp. candolleana*) and other local species.

Areas of high biodiversity value occurring on the eastern and southeastern side of the reserve remain largely intact and whilst some invasive flora and fauna are present, these areas retain a high biodiversity value (City of Victor Harbor 2023).



The Bluff with areas of early revegetation, West Island Conservation Park and Kings Head (Coast Protection Board, March 2024)

The cell has a long history of plantings, ranging from non-local plant species (some now considered to be woody weeds), those chosen as local species, but not from local provenance plant material to plants grown from local provenance and appropriate for the site. Remains of buildings and plantings from early European settlement of the area are still visible within the cell.

The vegetation present on top of the Bluff and across the southern and southeastern areas of the cell are examples of coastal heath and shrubland, which provide valuable habitat for a diverse range of native fauna. These areas provide connections for wildlife to move between dense and higher biodiversity areas like Newland Head Conservation Park and the Waitpinga Cliffs (City of Victor Harbor 2023)

The headland and central areas have been a priority for weed control, due to the relatively intact remnant vegetation in these zones. Extensive mapping of exotic species has been undertaken during 2015 and reveals the headland to be almost free of priority weeds.

Black Grass Saw-sedge (*Gahnia lanigera*), Sword-sedges (*Lepidosperma spp.*) and many native grass species present on the Bluff are potential larval food plants for butterfly species such as the Black and White Skipper (*Antipodia atralba*) and the rare Trimaculata Skipper (*Motasingha trimaculata trimaculata*) (Jeffery 2015, City of Victor Harbor 2023). Healthy and expanding populations of these plants will be very important for potential skipper species reintroduction to this site. Stolarski (2024) notes Wood White (*Delias aganippe*), Common Brown (*Heteronympha merope merope*) and multiple common butterfly species that are observed across the Fleurieu Peninsula are present in this cell. Many of the species of conservation significance do not occur in this cell as their host plants are not present or are in low numbers and unable to support reintroduction from neighbouring cells.

Although no official fauna survey has been undertaken to date Jeffery (2015) notes, the Short-beaked Echidna (*Tachyglossus aculeatus*) and Western Grey Kangaroos (*Macropus fuliginosus*) have been observed on site. Bush Rats (*Rattus fuscipes*) are believed to be present (from observation of burrows/soil disturbance), and Water Rats (*Hydromys chrysogaster*) have been observed in the marine environment off nearby Granite Island and may be Southern Fleurieu Coastal Action Plan 2026

present on site. The lack of large trees over much of the reserve may restrict the presence of the Common Brushtail Possum (*Trichosurus vulpecula*) and the Common Ringtail Possum (*Pseudocheirus peregrinus*), although these would likely occur in the vicinity of the reserve. In 2004 a Heath Goanna (*Varanus rosenbergi*) was sighted at the Bluff, a significant record due to its regional conservation rating of 'Critically Endangered'. Cunningham's Skink (*Egernia cunninghami*), which inhabits coastal cliffs, has a regional conservation rating of 'Vulnerable'. This species has been recorded on nearby Wright and Granite Island and is possibly present within the reserve.



Heath Goanna (*Varanus rosenbergi*) (M Stokes)

A number of state rare bird species have been recorded, including; Eastern Reef Egret (*Egretta sacra*), Peregrine Falcon (*Falco peregrinus macropus*), Common Sandpiper (*Actitis hypoleucos*), Sooty Oystercatcher (*Haematopus fuliginosus fuliginosus*), and Elegant Parrot (*Neophema elegans*) (City of Victor Harbor, 2023)

The diverse landscape around The Bluff including rocky outcrops, sandy beaches, dunes and headlands provide suitable habitats for many resident and migratory birds, including shorebirds, waders and seabirds. This includes species such as the White-bellied Sea Eagle (*Haliaeetus leucogaster*), Eastern Osprey (*Pandion haliaetus cristatus*), Little Black Cormorant (*Phalacrocorax sulcirostris*), Black-faced Cormorant (*Phalacrocorax fuscescens*), Gulls (*Larus spp.*) and Terns (*Sterna spp.*), which utilise the surrounding Bluff area for foraging, resting and roosting. Irregular sightings of a range of pelagic birds are also reported in this cell, including albatrosses, petrels, shearwaters and gannets.

Seagrass wrack (also known as Beach cast wrack) found regularly on these beaches has an important ecological function recycling nutrients back to coastal waters as well as protection and stabilisation of the shoreline and coastal dunes by acting as a trap that binds drifting sands and reduces sand erosion during winter (PIRSA 2014). Beach wrack also provides an important role as habitat and shelter for Hooded Plovers (*Thinornis cucullatus cucullatus*) and Pied (*Haematopus longirostris*) and Sooty Oystercatchers (*Haematopus fuliginosus fuliginosus*) as well as other shorebirds and juvenile fish. Beach cast wrack collection within Encounter Marine Park is prohibited in all zones except general managed use zones. Therefore, no removal of beach wrack is permitted in this cell or the Encounter Bay area.

No recognised estuaries occur in this cell.

Vegetation Communities

Coastal Cliff Low Shrublands, Hummock Grasslands & Very Low Open Woodlands

Coastal Grasslands

- Low Scented Mat-rush (*Lomandra effusa*) tussock iron-grass grassland.
- Kangaroo Grass (*Themeda triandra*) grassland with emergent low Kangaroo Thorn (*Acacia paradoxa*) +/- Clasping Goodenia (*Goodenia amplexans*) shrubs.
- Kangaroo Grass (*Themeda triandra*) +/- Corkscrew Spear-grass (*Austrostipa setacea*) +/- Knotty-butt Paspalidium (*Setaria constricta*) grassland with small isolated patches of Drooping Sheoak (*Allocasuarina verticillata*) + Kangaroo Thorn (*Acacia paradoxa*).

Coastal Shrublands

- Open Coast Beard-heath (*Leucopogon parviflorus*) +/- Coastal Wattle (*Acacia longifolia* ssp. *sophorae*) +/- Common Boobialla (*Myoporum insulare*) shrubland over open Sea-berry Saltbush (*Rhagodia candolleana* ssp. *candolleana*) +/- Twiggy Daisy-bush (*Olearia ramulosa*) shrubland over low Little Sword-sedge (*Lepidosperma curtisiae*) sedgeland + Kangaroo Grass (*Themeda triandra*) grassland
- Kangaroo Thorn (*Acacia paradoxa*) +/- Coastal Wattle (*Acacia longifolia* ssp. *sophorae*) shrubland over low Sea-berry Saltbush (*Rhagodia candolleana* ssp. *candolleana*) +/- Mallee Pomaderris (*Pomaderris paniculosa* ssp. *paniculosa*) +/- Clasping Goodenia (*Goodenia amplexans*) shrubland.
- Tall dense Sticky Hop-bush (*Dodonaea viscosa* ssp. *spatulata*) +/- *Acacia* spp. shrubland, with low open Ruby Saltbush (*Enchylaena tomentosa* var. *tomentosa*) shrubland and open exotic grassland
- Tall dense Golden Wattle (*Acacia pycnantha*) +/- Kangaroo Thorn (*Acacia paradoxa*) shrubland with a low open Sea-berry Saltbush (*Rhagodia candolleana* ssp. *candolleana*) +/- Ruby Saltbush (*Enchylaena tomentosa* var. *tomentosa*) shrubland understory
- Low open Sea-berry Saltbush (*Rhagodia candolleana* ssp. *candolleana*) +/- Common Boobialla (*Myoporum insulare*) +/- Coastal Wattle (*Acacia longifolia* ssp. *sophorae*) shrubland over open Knobby Club-rush (*Ficinia nodosa*) sedgeland and diverse native herbland

Coastal Woodlands

- Very open low Coastal White Mallee (*Eucalyptus diversifolia* ssp. *diversifolia*) +/- Ridge-fruited Mallee (*Eucalyptus incrassata*) woodland Tall open *Swamp Oak (*Casuarina glauca*) +/- **Melaleuca* spp. shrubland with Kangaroo Island (*Themeda triandra*) +/- *Rytidosperma* spp. +/- *Austrostipa* spp. +/- Knotty-butt Paspalidium (*Setaria constricta*) grassland.
- *Swamp Oak (*Casuarina glauca*) +/- Coastal White Mallee (*Eucalyptus diversifolia* ssp. *diversifolia*) woodland, tall * Coast Tea tree (*Gaudium laevigatum*) shrubland, over low Sea-berry Saltbush (*Rhagodia candolleana* ssp. *candolleana*) shrubland + Kangaroo Grass (*Themeda triandra*) +/- Knotty-butt Paspalidium (*Setaria constricta*) grassland.
- Very open Drooping Sheoak (*Allocasuarina verticillata*) woodland over very open *Swamp Oak (*Casuarina glauca*) +/- Common Boobialla (*Myoporum insulare*) +/- Coastal Wattle (*Acacia longifolia* ssp. *sophorae*) shrubland over * Kikuyu (*Cenchrus clandestinus*) +/- Kangaroo Grass (*Themeda triandra*) grassland.
- Very open Drooping Sheoak (*Allocasuarina verticillata*) woodland over low open Sea-berry Saltbush (*Rhagodia candolleana* ssp. *candolleana*) shrubland over Kangaroo Grass (*Themeda triandra*) +/- **Avena* sp. Grassland.

Revegetated areas

European settlement plantings (northern side of headland on hillslope above roadway to jetty)

- Cypress (*Cupressus* sp.), Wormwood (*Artemisia* sp.) and New Zealand Mirror-bush (*Coprosma repens*).

1970's revegetation (Australian native) central and northern areas behind housing and Whalers Inn

- Swamp Sheoak (*Casuarina obesa*), Tuart (*Eucalyptus gomphocephala*), Bushy Yate (*Eucalyptus lehmannii*), Maalok (*Eucalyptus platypus*), Scarlet Pear Gum (*Eucalyptus stoatei*), Willow Myrtle (*Agonis flexuosa*), Showy Honey Myrtle (*Melaleuca nesophila*), Bracelet Honey-myrtle (*Melaleuca armillaris* spp. *armillaris*) and Bottlebrush (*Callistemon* spp.) species.

Direct seeding in northwest corner of cell

- Sticky Hop-bush (*Dodonaea viscosa* spp.), Hop-bush Wattle (*Acacia dodonaeifolia*), Coastal Wattle (*Acacia longifolia* ssp. *sophorae*), Golden Wattle (*Acacia pycnantha*) and Totem-Poles (*Melaleuca decussata*)

Nearshore Habitats

Whole cell

This cell forms part of the Encounter Marine Park. The marine areas of cell F13 are within a Habitat Protection Zone (HPZ-7). This area includes part of the nursery grounds for the endangered Southern Right Whale and is part of the designated *Encounter Bay Whale Nursery Protection Area* from the Murray Mouth to The Bluff Victor Harbor. The waters around The Bluff within cell F13 are known habitat for Leafy Sea Dragons (*Phycodurus eques*).

Bryars (2013) describes the cell as dominated by bare sand offshore from a narrow coastal strip of medium/high profile reef around The Bluff (or Rosetta Head) and a patch of continuous sparse/medium seagrass in the sheltered lee of The Bluff (fig 13.1)

The cell is regionally significant due to the reef and seagrass habitats (Bryars 2013).

The seagrass composition has not been characterised but is known to contain *Amphibolis* and *Posidonia*. Subtidal reefs in the Encounter Bay region are typically composed of granite or limestone with a cover of macroalgae and sessile invertebrates (e.g. Turner et al. 2007, DEH 2008, Baker et al. 2009, Brook and Bryars 2014, Brook et al. 2020, Brock et al. 2023).

Artificial reefs occur within the cell in the form of a wharf and rock wall at The Bluff. The inshore bare sand is characterised by a low-energy reflective beach system (Short 2001).



*Jetty pilons provide artificial habitat for a range of invertebrates including Eleven-arm seastar (*Coscinasterias muricata*) sponges and sessile species. They also assist with camouflage habitats for Leafy Sea Dragon (*Phycodurus eques*) that is commonly seen in the nearshore habitats of this cell. (M Stokes)*

Although a marine mammal, the Southern Right Whale (*Eubalaena australis*) has an indirect impact on the reserve, with whale-watching being a popular tourist attraction. Other marine mammals such as the Long-nosed Fur Seal (*Arctocephalus forsteri*), Common Dolphin (*Delphinus delphis*), Bottlenose Dolphin (*Tursinops truncatus*), Leopard Seal (*Hydrurga leptonyx*), and Australian Sea Lion (*Neophoca cinerea*) have been recorded in the area (Jeffery 2015).

Iconic marine species

Western Blue Groper (*Achoerodus gouldii*) is a species of conservation concern and is protected throughout gulf waters, including Backstairs Passage eastwards to Newland Head (Drew et al. 2021). The south coast subregions are critical for the conservation of this species as these fish are site attached, slow growing and take years to reach sexual maturity (Bryars et al. 2012). The Bluff, Whalebone Beach and Encounter Deep in the Encounter subregion (F13-11), and Newland Head and West Island Outer in the south coast subregion (F14), have the highest abundances of Western Blue Groper on the south coast. This species is rarely recorded in subregions located further north. (Brook et al. 2020) Long term baseline monitoring of these sites and those in the “encounter subregion” will be important to assess any changes to populations from future development and urban infill.

Subtidal and intertidal reefs

Surveys of the subtidal reef at The Bluff have found a high diversity of fishes, invertebrates and macroalgae (Haig et al. 2006, Turner et al. 2007, DEH 2008, Baker et al. 2009, Brook and Bryars 2014, Brook et al. 2020, Brock et al. 2023). The intertidal reef at The Bluff has been surveyed for macroalgal, seagrass, mollusc and echinoderm species richness, and is characterised by a range of macroalgae (red, green and brown) and numerous (>30) mollusc species (Benkendorff et al. 2008). The cell lies inside the Encounter Bay region, which is a known ‘hot-spot’ for macroalgal species diversity (see Baker and Gurgel 2010). The Bluff is also a recognised hotspot for the Leafy Sea Dragon, which is associated with the macroalgal reef and seagrass habitats in the area.



Red-Spined Sea Urchin (Holopneustes porosissimus) (S Bryars)

Bryars (2003) listed eight fish and two macroinvertebrate species for the sheltered beach habitat between King Head and Rosetta Head, nine fish and one macroinvertebrate species for the seagrass habitat between Rosetta Head and the Hindmarsh River, 13 fish and two macroinvertebrate species for the unvegetated soft bottom habitat between King Head and Middleton Point, and 16 fish and seven macroinvertebrate species for the reef habitat between King Head and Middleton Point.

While the bare sand and seagrass habitats are likely to support a range of species (e.g. see Bryars 2003), no habitat condition or biological surveys appear to have been undertaken on these habitats within Cell F13.

The reef ecosystem baseline study (Brook et al. 2020) and current study by Brock et al. (2023) assessing the trends in the condition of rocky reef ecosystems of the greater Adelaide and Fleurieu Peninsula region found that the overall status of rocky reefs was stable or improving, based on several key indicators of condition (e.g., fish and macroinvertebrate species richness, community structure, large fish biomass, macroalgae percentage cover, and reef thermal index). Results from the Encounter subregion (cells F7-F12) indicate that macroinvertebrate and fish species richness, large fish biomass and the percentage cover of canopy-forming algae has remained stable or is increasing at these sites (Brock et al. 2023). Marine species in the Encounter subregion include 52 bony fish, three shark and ray, 41 species of marine invertebrate, and seven species of crustacean (Brock et al. 2023, Edgar and Barrett (2012), Edgar and Stuart-Smith (2014), Edgar et al. (2020)).



Southern Rock lobster (Jasus edwardsii) is a common recreational fishing species in this cell. (S Bryars)

The Bluff is one of eight sites used in the previous reef baseline study (Brook et al 2020) and used in the current reef trend analysis (Brock et al. 2023). Current reef biodiversity data for this reef (2005-2022) lists 34 species of fish, and 35 invertebrate species (Brock et al. 2023, Edgar and Barrett (2012), Edgar and Stuart-Smith (2014), Edgar et al. (2020)). High turbidity and sediment movement due to localised swell impedes regular reef sampling along the southern FP coastline. Long term baseline monitoring of these sites and those in the “encounter subregion” will be important to assess any impacts from future development and urban infill.

Reef Health surveys have been conducted on the subtidal reef at The Bluff since 2005 (Turner et al. 2007, Brook and Bryars 2014, Brook et al. 2020, Brock et al. 2023).

Surveys for uncommon and cryptic reef fishes have been conducted in the cell (see Baker et al. 2008, 2009, 2010).

Nearshore Habitats: Cell F13

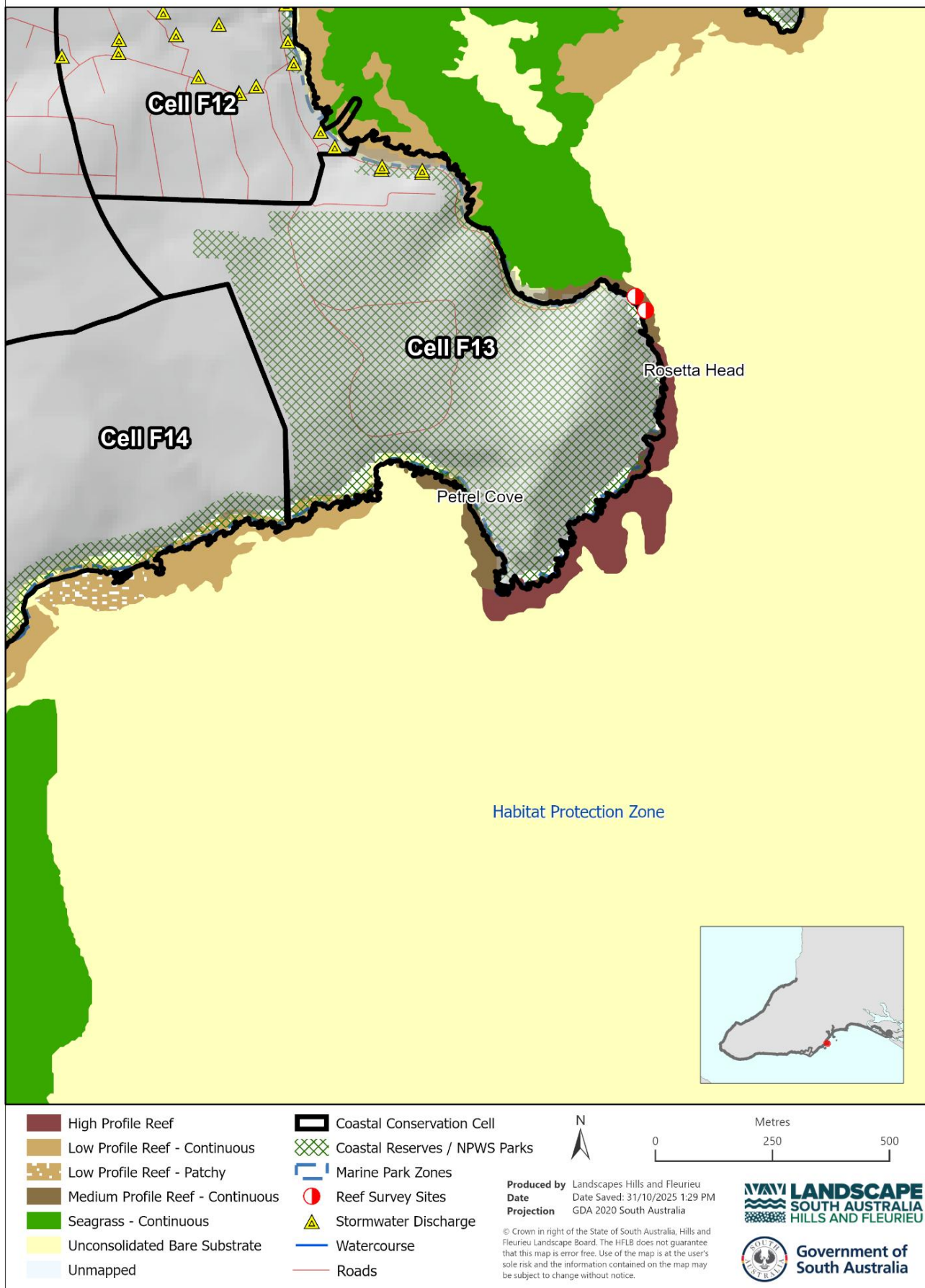


Figure 13.1 Nearshore habitats of Cell F13.

Threats

This small cell has a limited number of threats compared to neighbouring cells. However, those that do exist have a substantial impact on conservation values. A high proportion of exotic plant species, but few aggressive weeds, high visitation and population impacts, and modest contributions from vegetation block isolation, shape and size, land use and ownership, and cliff stability (Caton et al 2007).

The following declared and red alert weeds have been found within this cell: Bridal Creeper (*Asparagus asparagoides*), African Boxthorn (*Lycium ferocissimum*), Coast Tea-tree (*Gaudium laevigatum*), Sea Spurge (*Euphorbia paralias*), False Caper (*Euphorbia terracina*) Olives (*Olea europaea* ssp. *Europaea*), Salvation Jane (*Echium plantagineum*), Perennial Veldt Grass (*Ehrharta calycina*), Coastal Galenia (*Aizoon pubescens*), Cape Weed (*Arctotheca calendula*), Onion Weed (*Asphodelus fistulosus*), Kikuyu (*Cenchrus clandestinus*), Feather-top (*Cenchrus longisetus*), Drain Flat-sedge (*Cyperus eragrostis*), Broad-leaf Cotton-bush (*Gomphocarpus cancellatus*), Pincushion (*Sixalix atropurpurea*), Twiggy Mullein (*Verbascum virgatum*), Apple of Sodom (*Solanum linnaeanum*), Hottentot Fig (*Carpobrotus edulis*), New Zealand Mirror-bush (*Coprosma repens*), Horehound (*Marrubium vulgare*).

The Council Master Plan for The Bluff (2023) identified needs for improved car park and viewing platforms (the latter has recently been completed) and should support increased visitation for whale watching and recreation activities. Increased visitation can compound existing impacts such as erosion, informal access, vegetation trampling, litter, and weed spread. There are also access issues from mountain biking and unauthorised vehicle access to the reserve.

Where paths leading to and from The Bluff summit are not clearly defined, vegetation has been damaged, with soil becoming vulnerable to erosion. As a result of the steep terrain and loose gravelly surface, people often walk to the side of the path where vegetation creates a more stable foothold, therefore widening paths, trampling vegetation and exacerbating the issue (Jeffery 2015).

Previous revegetation with non-local native species has occurred in various locations within the cell.

Flora and fauna species of conservation concern in limited numbers and under threat from foot and mountain-bike traffic, off-road vehicles accessing inappropriate areas of the reserve, or slashing and spraying (Jeffery 2015). Several butterfly and skipper species that have localised populations are limited in capacity for dispersal and/or colonisation of new sites. The lack of suitable habitats, weed invasion and interconnectivity between habitats prohibits movements and, therefore, creates localised isolation of populations. Urbanisation of coastal areas reduces the efficiency of species movements that could otherwise occur. Several species are now restricted to pockets of isolated habitats resulting in some being vulnerable to population collapse (Stolarski 2024).

Extensive weed control has been undertaken over the last decade by Council, coastal community groups and landscape boards addressing priority red alert weeds including Bridal Creeper (*Asparagus asparagoides*), Bridal Veil (*Asparagus declinatus*), Western Coastal Wattle (*Acacia cyclops*), African Boxthorn (*Lycium ferocissimum*), Boneseed (*Chrysanthemoides monilifera*), Coast Tea-tree (*Gaudium laevigatum*), Polygala (*Polygala myrtifolia*) and Blowfly Bush (*Rhamnus alaternus*).

Other weed species that have also been targeted include Golden Wreath Wattle (*Acacia saligna*), Olive (*Olea europaea*), Hottentot Fig (*Carpobrotus edulis*), New Zealand Mirror-bush (*Coprosma repens*), Horehound (*Marrubium vulgare*), Radiata pine (*Pinus radiata*), Swamp Sheoak (*Casuarina obesa*), Cape Tulip (*Moraea flaccida*) and Tree Mallow (*Malva arborea*).

A relatively small infestation of Sea Wheat-grass (*Thinopyrum juniforme*) is present on Petrel Cove beach (Jeffery 2015).



Petrel Cove with rocky shores of geological significance, Wild South Coast Way (Heysen Trail) extends west from above the beach with views of West Island (S Sutherland)

There are pest animal threats to coastal fauna and flora from rabbits (*Oryctolagus cuniculus*), Brown hares (*Lepus capensis*), foxes (*Vulpes vulpes*), goats (*Capra hircus*), and cats (*Felis catus*). Coordinated collaboration between landowners and managers is required to manage pest animals (refer to regional pest management strategies). Historically, rabbits had a major impact on the failure of direct seeding programs, despite an annual rabbit control program.

The European Rabbit (*Oryctolagus cuniculus*) and Fox (*Vulpes vulpes*) have both been observed on site. Other non-native fauna which may be present include the Brown Hare (*Lepus capensis*), Black Rat (*Rattus rattus*), Brown Rat (*Rattus norvegicus*) and House Mouse (*Mus musculus*). Domestic dogs (*Canis lupus familiaris*) are regularly walked within the reserve, on and off the lead, Cats (*Felis catus*) may be present either as ferals or domestic pets, which are likely to have an impact particularly on birds and reptiles (Jeffery 2015).

A sighting of the declared pest Common Myna (*Acridotheres tristis*) in Encounter Bay (on the coastal slopes adjacent to cell F12) was reported in 2024, and this is the only known location of the bird in South Australia. This aggressive invasive species, also known as the Indian Myna, is established throughout eastern Australia and poses a threat by evicting native birds from their nests, destroying eggs, and killing chicks. They also damage crops and orchards and are a nuisance for residents. A pest alert remains in place for any sightings to be reported via MynaScan to aid eradication efforts.

Stormwater management within the cell is limited and requires review to minimise erosion from carparking and trail locations that impact on vegetation areas particularly on steep hillsides.



Stormwater management and erosion from steep hillsides are a challenge for land managers (S Rawson)

Planning and Design code zoning in this cell is not reflective of current land use and conservation values as entire cell is zoned Rural.

Bryars (2013) describes the coastline as sparsely populated and having virtually no freshwater inputs, such that nutrient and sediment inputs from direct stormwater and catchment flows are likely to be insignificant. Nonetheless, land-based inputs to the adjacent cell (F12), coupled with further housing development and increased run-off, could potentially affect habitats within cell F13. Historic rock dumping to protect The Bluff Road has smothered areas of intertidal rock platform (Bryars 2013).

Bryars (2013) identified threats to seagrass and reef were low. No measurable threats to sand were identified. Due to the relatively small areas of continuous reef and seagrass (all of which lie inshore) it was considered that the consequence of catchment water and stormwater could be moderate but that the likelihood of this occurring was remote for catchment water and rare for stormwater.

Outflow from the River Murray has been significant in recent times, particularly during flooding events, with associated turbid waters extending westward from the Murray Mouth across Encounter Bay to The Bluff and possibly further. The impacts of these episodic flows on nearshore habitats are unknown.

Opportunities

Manage visitor numbers and impacts to ensure coastal areas can support growing demand, while maintaining and improving the quality of experiences without diminishing the values of the cell. Investigate improved infrastructure and fencing to ensure for environmentally and culturally sensitive path formalisation and low-impact walking trails, and further opportunities to reduce impacts on the coastal environment. Education, restrictions and compliance regarding off-leash dogs. Collaborate with First Nations communities, tourism operators and agencies to support community education and monitor visitor usage, with the aim of enhancing visitor awareness of coastal ecological and cultural values and promoting appropriate behaviours.

Community education opportunities regarding:

- Migratory and residential shorebirds and sea birds (dogs on leads, nesting sites, citizen science projects, managing visitor disturbance) and interpretive signage at high use areas.
- Fragile nature of coastal areas that are sensitive to foot traffic, soil compaction and erosion.
- Education and targeted communications regarding marine parks, nearshore habitats.
- Increased cultural awareness training and knowledge of culturally appropriate processes to respect known cultural heritage sites for land managers and coastal community groups
- Citizen science monitoring to contribute to intertidal reef monitoring, Seagrass restoration, dolphin watch, beach pole monitoring, Fleurieu seabird monitoring program and beach nesting birds.
- Coastal gardens and resident/business owner education
- Value of place and coastal values, responsible beach use and reducing human impact on dunes.
- There is opportunity for signage renewal across coastal areas to educate the community about coastal conservation, cultural significance and appropriate behaviours.

Opportunity to work with nature-based tourism (commercial and recreational) operators and community volunteers to increase education and stewardship of local coastal environments and protection of species

This cell (along with Newland Head cells (F14 - F15) is highlighted as one of three areas including Normanville Dunes (F23-F24) and the beaches and lower slopes of Fishery Beach, Lands End, Cape Jervis and Morgans Beach (F19 - F20) within this plan to have high conservation and high threat values. As a result, the priority of actions (conservation and threat) for these areas have been rated higher than in other cells and warrant prioritised effort and investment.

Over the last decade there has been considerable Council and community effort invested in path improvement, weed control and revegetation within this Council reserve. Continue to implement the Vegetation Management Plan (Jeffery 2015) to protect remnant heath vegetation on cliffs and improve habitat condition (weed control, restoration activities, pest management to reduce grazing pressures). Support community participation to implement strategic actions guided by the vegetation management plan.

Implement Bluff Master Plan (2023) actions to manage access and erosion issues that have been long present on the Bluff and are likely to have increased from increased visitor and recreational activities. Implement a formed trail to and from The Bluff summit and within the cell, to protect native vegetation, stabilise soil, decrease the use of mountain bikes, and increase the safety of trail users.



Trails currently traverse the steep slopes of The Bluff and are used by walkers and trail riders as per the tracks seen above (S Rawson)

Guiding principles in the Master Plan that have opportunity to address conservation outcomes and threatening processes include:

- Improving trails, tracks and connections,
- Re-wilding The Bluff (revegetation and landscape management),
- Discovering, uncovering and learning narratives, stories and histories,
- Limiting development and built form,
- Strengthen connection to rugged and wild landscape,
- Enhance connection to marine environment.

Improve the conservation values through additional revegetation and restoration practices to aid in protecting and enhancing the unique natural coastal vegetation communities and character of The Bluff. Areas identified for revegetation should work towards increasing the diversity and distribution of endemic plant species, including those of conservation concern or in limited numbers within the cell. Increasing plant and animal resilience to progressive climate change is important for this area and can be assisted by improving connectivity between remnant vegetation patches.



Large areas of The Bluff have undergone revegetation including several tracks that have been closed (S Rawson)

Previous revegetation with non-local native species should be removed in a staged-approach and replaced with local plant species. Monitor for spread of non-native species and control new emergences.

The Master Plan (2023) recommends an update of the existing Vegetation Management Plan (Jeffery 2015), identifying key rehabilitation areas, strengthening biodiversity values through additional revegetation, native habitat creation and protection, and appropriate land management and maintenance.

Vegetation within associations, particularly on the exposed eastern side of The Bluff have seen substantial recovery since rabbit control has been undertaken, with regrowth of native flora species including Kangaroo Grass (*Themeda triandra*) and Short-stem Flax-lily (*Dianella brevicaulis*). Future pest fauna management should focus on rabbits as a priority, but additional works on controlling the numbers of foxes, hare and goats within the area surrounding The Bluff should also be considered.



Muntries (*Kunzea pomifera*) is a hardy native groundcover found on the Bluff (D Easton)

The use of tree guards on revegetated tubestock and an ongoing rabbit control program has significantly reduced the grazing pressure from rabbits within the cell. Carry out an annual rabbit control program, to be monitored and varied depending on the season and number of rabbits present.

Undertake ongoing pest plant control, focus on those weeds which are either Declared weeds, WoNS, or those that are red alert species, particularly invasive or a threat to areas of high biodiversity value (City of Victor Harbor 2023). Assess the population of Sea Wheat-grass (*Thinopyrum juniforme*) for eradication from Petrel Cove, considering limited distribution and proximity of nearby populations.

Improving infrastructure to limit unauthorised vehicle access in the reserve, which poses a threat to flora and fauna. Consider structural deterrents for off-road vehicles.

Stolarski (2024) proposes survey for butterfly habitats and priority species as limited survey has been undertaken. Increase suitable habitat for coastal butterfly populations including planting of host plants in coastal areas to increase habitat suitability for local introductions.

This cell is important for coastal raptors and on-going monitoring and management is critical to minimise visitor disturbance and to support habitat condition for raptor populations. Investigate opportunities to support and implement the recovery plan for Eastern Osprey and White-bellied Sea Eagles (2022). Monitor, maintain and improve the quality of vegetation for the provision of wildlife habitat for priority species.

As part of the *Coastal Dune and Clifftop Vegetation Surveys* (1995–1997) (Opperman 1999), long-term monitoring sites were established across South Australia and the Southern Fleurieu region to assess the structure and composition of coastal dune and clifftop plant communities, and their relationships to regional and environmental factors. Given that nearly 30 years have passed since these surveys were undertaken, there is strong potential for shifts in geographical range and changes in species composition due to the long-term impacts of climate change. The *Survey of Remnant Vegetation of the Southern Fleurieu Peninsula* involved biological surveys conducted between 1987 and 1991 to establish baseline data on remnant vegetation and swamps in the region south of Adelaide, South Australia.

During the development of this plan, and through the assessment of flora and fauna (both native and introduced) species lists available via the Biological Database of South Australia (BDBSA), significant gaps were identified between recorded species and known species distributions within cells. To address these data deficiencies and improve the accuracy of long-term ecological records, both above foundational vegetation survey projects should be repeated and incorporated into an ongoing monitoring program. Fauna assessments across cells to establish population baselines, update existing records and species distribution, particularly of underrepresented groups (reptiles and invertebrates) should be undertaken.

Improve stormwater management within cell to reduce erosion, including increased passive treatment and WSUD (Water Sensitive Urban Design) opportunities through natural filtration systems, to connect to existing stormwater drainage reserve and prevent impacts to nearshore environments.

Review current zoning of cell under the Planning and Design Code to include conservation values and reflect current land use.

Biological surveys of the seagrass and bare sand habitats are required to better understand habitat values and compile meaningful species lists for the cell. Collaboration between agencies, researchers, and community to monitor seagrass condition and inform active management. Opportunities for increased coordinated between community groups and volunteers to support landscape scale conservation approach to coastal management.

There are opportunities for collaboration between partners, such as National Parks, Marine Parks, First Nations, landscape boards, volunteer groups, community and nature-based tourism operators for monitoring of sea birds, coastal raptors, marine mammals and other wildlife.

Supporting community volunteer, First Nations and land manager efforts to undertake priority restoration and conservation work in this cell. Strengthening partnerships with adjoining landowners, volunteer organisations, researchers, and the wider community to foster collaboration and long-term management benefits for biodiversity protection and restoration.

Collaborate with the SA Climate Ready Coasts program to enhance, resource, and implement coastal management initiatives and accelerate coastal hazard adaptation planning across South Australia. This program supports the development and delivery of Coastal Hazard Adaptation Plans (CHAPs), led by the Local Government Association (LGA) of South Australia in partnership with the SA Coast Protection Board, the Department for Environment and Water, the Adelaide Coastal Councils Network, and the SA Coastal Councils Alliance.

Climate change threats to coastal biodiversity (See BMT 2025)

Potential climate change threats to coastal biodiversity

Cell F13 is a granite headland that supports algal habitats relatively remote from urban stormwater inputs that may discharge higher pollutant loads under increased storm intensities under climate change projections. This cell is outside the area of the Coastal Adaptation Plan for the City of Victor Harbor (Western et al., 2021)

Biodiversity assets potentially vulnerable to climate change in this cell include:

- Algal habitats
- Temperate reefs
- Coastal cliffs

These ecosystems may be particularly vulnerable to the direct impacts of climate change particularly sea level rise, increased drought, higher temperatures and more intense storms.

Seasonal surface run-off on slopes will be drastically reduced by soil water budget changes. However, unpredictable intense rainstorms will locally cause fast run-off on slopes. Changes in wave climate, likely to increase the long period swell component, would accentuate high tide changes to backshores in pocket beaches and to talus slopes at the base of cliffs (Caton et al 2007).

Changes in ocean temperatures, salinity, and acidity (from increased CO₂ levels) can directly affect the health of temperate reefs. Warmer waters and increased acidification may hinder the growth of calcareous organisms, such as marine molluscs and phytoplankton.

Cell Action Table

Component	Issue	Proposed Action	Priority	Key Players
Whole cell	Threats and opportunities to improve protection of cultural heritage within cell.	Cultural consultation and collaboration to appropriately manage cultural heritage within this area. Prevent damage, disturbance, or interference to cultural heritage by adhering to the Aboriginal Heritage Act 1988.	High (cons/ threat)	NAC, Council, LHF, Coastal Community groups, Aboriginal Affairs and Reconciliation - Department of Premier and Cabinet
	Increased visitation and recreational pressure on dunes and viewing points due to increased local population and tourist promotion (particularly whale watching).	Assess increased visitation capacity at known sites, repair or upgrade fencing to restrict unauthorised access and review car parking capacity. Manage visitor numbers within sustainable limits in ecologically and culturally sensitive and significant areas - consult with First Nations groups.	High (cons/ threat)	Council, NAC, land managers
		Investigate opportunities for community education and engagement regarding unique and valuable coastal landscape and fragile nature of coastal areas. Dedicated cultural education and training for land managers, agency staff and land stewards	High (Cons/ Soc)	Council, LHF, NPWSSA, NAC, coastal community groups, Community groups
		Opportunity to work with nature-based tourism operators to increase education and stewardship of local coastal environments, ensuring that tourism is conducted in partnership with First Nations with cultural obligation.	Medium (Cons)	Council, land managers, NAC, NPWSSA, coastal community groups
		Development of consistent signage and messaging for coastal values and compliance for conservation areas (public managed lands, coastal reserves) across the Fleurieu Peninsula coast. Co-design signage with First Nations/ knowledge holders.	Medium (Soc/ Cons)	Council, land managers, NAC, NPWSSA, coastal community groups
		Monitor aquatic activities (boating, paddleboard and jet skis) for increased pressures on local coastal habitats and fauna species interactions.	High (threat)	Council, NPWSSA, PIRSA
		Events on beaches and coastal habitats must not impact on natural values, especially listed threatened species and communities, in the area or vicinity of events. Event organisers should be informed, where appropriate via permits, on their obligations to not inflict environmental harm and to undertake actions in accordance with relevant legislation and by-laws.	Medium (threat)	Council, DEW, NPWSSA, BirdLife Australia, event managers
		New weed incursions in reserves adjacent to residential areas.	Monitor for new weed incursions, record incursions via public database (e.g. BDBSA) and control new incursions as a priority.	High (Cons/ threat)
	Monitor changes to dunes through BushRAT or similar monitoring to measure condition assessment and change.		High (cons/ threat)	Council, LHF, Community Groups.
	Improvement of native vegetation values.	Continue to implement the Bluff Vegetation Management Plan (2015) and Master Plan (2023).	High (Cons / threat)	Council, community, NAC business/ contractors/rangers, coastal community groups
		Update of the existing Vegetation Management Plan (Jeffery 2015) identifying key rehabilitation areas, biodiversity values and protection, appropriate land management and maintenance.	Medium (cons/ threat)	Council, coastal community groups, NAC business/ contractors/rangers, LHF
		Increase the diversity and distribution of endemic plant species including those of conservation concern or in limited numbers within the cell.	High (cons)	Council, coastal community groups, LHF
	Reduction in pressure of invasive weeds.	Target priority weeds and continue staged removal of non-local native species planted within old revegetation sites with local native plants.	High (Cons / threat)	Council, community, NAC business/ contractors/rangers,
		Monitor for spread of non-native species, record incursions via public database (e.g. BDBSA) and control new incursions as a priority.	High (Cons / threat)	Council, community.
		Assess the population of Sea Wheat-grass (<i>Thinopyrum juniforme</i>) for eradication from Petrel Cove considering limited distribution and proximity of nearby populations.	High (Cons / threat)	Council, community groups, NAC business/ contractors/rangers, LHF

Component	Issue	Proposed Action	Priority	Key Players
Whole cell	Threat to coastal fauna and flora from pest animals (rabbits, foxes and cats).	Coordinated collaboration between landowners and managers is required to manage pest animals.	High (threat)	Councils, land owners, NAC business/contractors/rangers, LHF
		Report sightings of feral animals (deer, fox, rabbit, cat and declared species) through the feral scan pest animal recording and management tool	High (threat)	Land managers, community, coastal community groups
	Butterfly habitats and host plant protection.	Identify locations of potential butterfly habitats and host plants with the cell.	High (cons)	Council, DEW, LHF, coastal community groups
		Extension of existing habitats and reintroduction of locally extinct butterfly species.	Medium (cons)	Council, DEW, LHF, NAC business/contractors/rangers, coastal community groups
		Undertake survey of cell to identify diversity of species within cell and potential habitats for restoration and reintroduction.	Medium (cons)	Council, LHF, coastal community groups
	Valuable habitat for coastal raptors (White-bellied Sea Eagle and Eastern Osprey).	Ongoing monitoring and management of high values nesting and foraging areas.	High (cons)	NPWSSA, DEW, LHF, NAC business/contractors/rangers, Council
		Implement the recovery plan for Eastern Osprey and White-bellied Sea Eagles (2022).	High (cons)	DEW, NPWSSA, LHF
	Multiple community groups and volunteers across coastal areas.	Facilitate opportunities for increased coordination and sharing of skills and information between community groups and volunteers to support landscape scale approach to coastal conservation and management.	High (Cons)	Council, land managers, LHF, NAC, coastal community groups
	High value habitat for marine mammals, important nursery areas for Southern Right and Humpback whales.	Continue monitoring and management of nursery areas and compliance of impact causing activities.	High (cons/ threat)	DEW, NPWSSA, SA Whale Centre, NAC business/contractors/rangers, Encounter Whales
	Multiple Citizen Science programs and opportunities.	support citizen science initiatives (dolphin watch, beach pole monitoring, quail populations, Fleurieu seabird monitoring program) to increase data collection and improve management and community environmental awareness.	Medium (Cons)	Council, land managers, DEW, LHF, NAC, coastal community groups
	Aged baseline data and significant gaps in recorded flora and fauna species across the Southern Fleurieu region.	Repeat and integrate historical vegetation surveys into a long-term monitoring program to update records and address data deficiencies.	Medium (cons/ threat)	DEW, LHF, councils, coastal community groups
		Undertake fauna assessments across cells to establish baselines, update records and species distribution, particularly of underrepresented groups (reptiles and invertebrates).	Medium (cons/ threat)	DEW, LHF, councils, coastal community groups
		Identify potential funding sources to repeat these long-term flora monitoring sites and fauna assessments.	High (cons/ threat)	DEW, LHF, councils.
	Stormwater impacts from inland development are likely to impact marine intertidal habitats and may accelerate seabed deepening and coastal erosion. Turbidity from suspended sediments and nutrients are a significant threat to reef and seagrass habitats.	Monitor and manage stormwater to minimise impacts in the coast and marine environment. Implement Water Sensitive Urban Design (WSUD).	High (Threat)	Council, CPB, Water Sensitive SA
	Physical changes on the coast and natural assets from sea level rise (such as coastal squeeze on tidal habitats, erosion, vegetation loss, marine turbidity and light reduction).	Continue monitoring and implementation of Coastal Adaptation Study recommendations, including key locations and priorities for funding. Support partnerships for ongoing investigation and monitoring in the coastal zone, working with the Coast Protection Board to identify adaptation options for the future.	High (Cons. Threat)	CPB, Council, community, university and research agencies, Climate Ready Coasts Program
Zoning of whole cell is not representative use.	Review current zoning of cell under the Planning and Design Code to include conservation values and reflect current land use.	Medium (Cons/ Threat)	Council, CPB, Plan SA, Department for Housing and Urban Development (DHUD)	

Component	Issue	Proposed Action	Priority	Key Players
Carpark at base of walking track;	Care in use of site: potential impact of very high visitor numbers. Safety on steep slopes.	Maintenance and improvement of car park and walking track and interpretation as per The Bluff master plan.	High (threat)	Council.
Road to Bluff Jetty	Limited access and car parking leading to unauthorised tracks and erosion.	Implement The Bluff master plan actions to manage access and erosion issues.	Medium (threat)	Council, NAC business/contractors/rangers,
Nearshore habitats (Reef, Seagrass)	Sediments and nutrients via stormwater drains and catchment water.	Support initiatives for catchment revegetation and improved land management practices.	High (cons/threat)	City of Victor Harbor, LHF, NAC business/contractors/rangers,
		Support initiatives to collect and reuse stormwater (e.g. see Urban Stormwater Management Plan (2024)).	Medium (cons)	City of Victor Harbor, LHF
		Long term baseline condition monitoring of reef habitats and those in the "encounter subregion" will be important to assess any impacts from future development and urban infill.	High (cons/threat)	DEW, NPWSSA, LHF
	Need for increased knowledge on intertidal and subtidal reefs and impacts on their systems.	Collaboration between government agencies, researchers, and community to monitor intertidal and subtidal reefs condition and inform active management.	High (Cons / threat)	DEW, NPWSSA, Council, LHF, NAC business/contractors/rangers,
	Lack of knowledge of seagrass condition and species diversity in Encounter Bay.	Collaboration between government agencies, researchers, and community to monitor seagrass cover, species diversity, condition and inform active management.	Medium cons/(threat)	DEW, SARDI, EPA, SA Water, LHF, NPWSSA, universities, Council, community
		Investigate opportunities to support reduction of land based impacts to avoid further loss, promote natural recovery of seagrasses and investigate potential for assisted restoration of seagrass habitats with community	High (cons/threat)	DEW, LHF, SARDI, NPWSSA, Council
Climate (Cliffs and rocky headlands)	More intense rainfall events likely to increase soil erosion.	Restoration of native plant species to assist soil stabilisation.	High (cons/threat)	Council, coastal community groups, NAC business/contractors/rangers, LHF
	Increased aridity likely to make growing conditions less suitable to native vegetation fragments.	Restoration of native plant species to assist soil stabilisation.	High (cons/threat)	Council, coastal community groups, NAC business/contractors/rangers, LHF
	Increased sea levels contribute to more frequent and intense wave action, which accelerates cliff erosion.	Restoration of native plant species to assist soil stabilisation.	Medium (threat)	Council, coastal community groups, NAC business/contractors/rangers, LHF
Climate (Macroalgal reefs and seagrasses)	More intense rainfall events likely to lead to increased pollutants, nutrients and suspended sediments washed into coastal waters especially during first flush.	Monitor stormwater quality.	Medium (threat)	Council, DEW, LHF
	Increased storm surge can cause dislodgment of algae and seagrasses.	Monitor stormwater quality.	Medium (threat)	Council, DEW, LHF
		Undertake restoration and monitoring of benthic flora.	Medium (threat)	Council, DEW, LHF
	Higher temperatures can lead to increased incidence and persistence of marine heatwaves and increased stress on temperate reefs and seagrasses, reducing biodiversity.	Monitor stormwater quality.	Medium (threat)	Council, DEW, LHF
	Ocean acidification can impact the life history of marine species.	Monitor stormwater quality.	Medium (threat)	Council, DEW, LHF
		Undertake benthic flora mapping to determine areas or opportunities for restoration.	High (cons)	DEW, Landscape Boards

Relevant management plans

- Biodiversity and Natural Assets Management Plan: 2023 to 2028 (2023) City of Victor Harbor
- Environmental Management Plan: 2025 – 2030 (2025) City of Victor Harbor
- The Bluff Master Plan 2023- 2043 - Kongkengguwarr | Longkewar | Rosetta Head (2023) Prepared by Hatch Design for the City of Victor Harbor
- The Bluff Reserve Vegetation Management Plan (2015) Prepare by L. Jeffery, City of Victor Harbor
- Caton B. Fotheringham D. Lock C. Royal M, Sandercock R. Taylor R. (2007). Southern Fleurieu Coastal Action Plan and Conservation Priority Study. Prepared for Adelaide and Mount Lofty NRM Board, Alexandrina Council, City of Victor Harbor, District Council of Yankalilla, Goolwa to Wellington Local Action Plan and Department for Environment and Heritage.
- Landscapes Hills and Fleurieu (2024) Hills and Fleurieu Regional Pest Plant and Animal Strategy 2024 - 2029.
- South Australian Recovery Plan for Eastern Osprey and White-bellied Sea Eagle (2022) Department for Environment and Water
- Ngarrindjeri Nation (2007) Ngarrindjeri Nation Yarlular-Ruwe Plan. Caring for Ngarrindjeri Sea Country and Culture. (Ngarrindjeri Tendi, Ngarrindjeri Heritage Committee and Ngarrindjeri Native Title Management Committee, Ngarrindjeri Land and Progress Association, Meningie).
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- Western, Bourman, and Hesp (2021) Coastal Adaptation Study (Stage 1) Coastal Adaptation Strategy (Stage 2) Final Report for City of Victor, Integrated Coasts, October 2021.
- Victor Harbor Urban Stormwater Management Plan (2024) prepared by Southfront for the City of Victor Harbor
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Cell Biota (Flora and Fauna)

Lists provided are specific to this cell from Biological Database of South Australia (BDBSA), technical updates, review of publications and local input. Conservation ratings (National, State and Sub regional) are included for flora and fauna.

Note: Restricted species as per Department for Environment and Water (DEW) specifications have been omitted from the tables due to the size of cells and requirement for 10km² buffering of data. However, records are included in the total species numbers per cell. Please contact DEW directly for restricted data requests.

FLORA Summary

Vegetation Block Metrics	The Bluff Coastal Reserve (Council)			
Terrestrial Habitat Description/s	See Terrestrial biodiversity vegetation communities in cell description.			
# Flora in cell	267			
# Native Flora in cell	179			
# Introduced Flora in cell	88			
# Conservation Rated Flora in cell	8 (1 national, 8 state)			
# Threatened Ecological Communities (EPBC Act)	-			
Conservation Rated Flora	Species	Common Name	EPBC Act Status	NPW Status
	<i>Acacia dodonaeifolia</i> [^]	Hop-bush Wattle		R
	<i>Atriplex australasica</i>	Native Orache		R
	<i>Correa alba</i> var. <i>pannosa</i>	White Correa		R
	<i>Cyperus sanguinolentus</i>	Dark Flat-sedge		R
	<i>Dianella longifolia</i> var. <i>grandis</i> [^]	Pale Flax-lily		R
	<i>Eucalyptus fasciculosa</i> [^]	Pink Gum		R
	<i>Rumex dumosus</i>	Wiry Dock		R
	<i>Spyridium coactilifolium</i>	Butterfly Spyridium	VU	V

All Native Flora in cell

Species	Common Name	EPBC Status	NPW Act Status	Subregional Status*
<i>Acacia dodonaeifolia</i> ^	Hop-bush Wattle		R	RA
<i>Acacia longifolia</i> ssp. <i>sophorae</i>	Coastal Wattle			LC
<i>Acacia paradoxa</i>	Kangaroo Thorn			LC
<i>Acacia pycnantha</i>	Golden Wattle			LC
<i>Acaena echinata</i>	Sheep's Burr			LC
<i>Acaena novae-zelandiae</i>	Biddy-biddy			LC
<i>Actites megalocarpus</i>	Coast Sow-thistle			NT
<i>Allocasuarina striata</i>	Stalked Oak-bush			LC
<i>Allocasuarina verticillata</i> ^	Drooping Sheoak			LC
<i>Anthosachne scabra</i>	Native Wheat-grass			LC
<i>Apium annuum</i>	Annual Celery			RA
<i>Apium prostratum</i> var. <i>filiforme</i>	Native Celery			LC
<i>Apium prostratum</i> var. <i>prostratum</i>	Native Celery			LC
<i>Arthropodium fimbriatum</i>	Nodding Vanilla-lily			NT
<i>Atriplex australasica</i>	Native Orache		R	EN
<i>Atriplex semibaccata</i>	Berry Saltbush			LC
<i>Atriplex suberecta</i>	Lagoon Saltbush			NT
<i>Austrostipa curticoma</i>	Short-crest Spear-grass			LC
<i>Austrostipa flavescens</i>	Coast Spear-grass			LC
<i>Austrostipa hemipogon</i>	Half-beard Spear-grass			LC
<i>Austrostipa mollis</i>	Soft Spear-grass			LC
<i>Austrostipa nitida</i>	Balcarra Spear-grass			NT
<i>Austrostipa nodosa</i>	Tall Spear-grass			LC
<i>Austrostipa scabra</i> ssp. <i>scabra</i>	Rough Spear-grass			NT
<i>Austrostipa semibarbata</i>	Fibrous Spear-grass			LC
<i>Austrostipa setacea</i>	Corkscrew Spear-grass			NT
<i>Austrostipa</i> spp.^	Spear Grass			
<i>Billardiera cymosa</i> ssp.	Sweet Apple-berry			
<i>Bulbine bulbosa</i>	Bulbine-lily			NT
<i>Callistemon rugulosus</i>	Scarlet Bottlebrush			RA
<i>Calocephalus citreus</i>	Lemon Beauty-heads			RA
<i>Calostemma purpureum</i>	Pink Garland-lily			LC
<i>Carex breviculmis</i>	Short-stem Sedge			LC
<i>Carpobrotus rossii</i>	Native Pigface			
<i>Cassinia complanata</i>	Sticky Cassinia			
<i>Cheilanthes austrotenuifolia</i>	Annual Rock-fern			LC
<i>Chloris truncata</i>	Windmill Grass			LC
<i>Chrysocephalum apiculatum</i>	Common Everlasting			LC
<i>Cladophora lehmanniana</i>				
<i>Cladosiphon filum</i>				
<i>Convolvulus remotus</i>	Grassy Bindweed			LC
<i>Correa alba</i> var. <i>pannosa</i>	White Correa		R	VU
<i>Correa pulchella</i>	Salmon Correa			RA
<i>Crassula decumbens</i> var. <i>decumbens</i>	Spreading Crassula			LC
<i>Cullen australasicum</i> ^	Tall Scurf-pea			RA
<i>Cyperus sanguinolentus</i>	Dark Flat-sedge		R	VU
<i>Cystophora expansa</i>				

Species	Common Name	EPBC Status	NPW Act Status	Subregional Status*
<i>Cystophora intermedia</i>				
<i>Cystophora moniliformis</i>				
<i>Cystophora retorta</i>				
<i>Dianella brevicaulis</i>	Short-stem Flax-lily			LC
<i>Dianella longifolia</i> var. <i>grandis</i> [^]	Pale Flax-lily		R	VU
<i>Dichelachne crinita</i>	Long-hair Plume-grass			LC
<i>Dichondra repens</i>	Kidney Weed			LC
<i>Dictyosphaeria sericea</i>				
<i>Dilophus fastigiatus</i>				
<i>Disphyma crassifolium</i> ssp. <i>clavellatum</i>	Round-leaf Pigface			LC
<i>Distichlis distichophylla</i>	Emu-grass			LC
<i>Distromium multifidum</i>				
<i>Dodonaea viscosa</i> ssp. [^]	Sticky Hop-bush			
<i>Dodonaea viscosa</i> ssp. <i>Spatulata</i> [^]	Sticky Hop-bush			LC
<i>Einadia nutans</i> ssp.	Climbing Saltbush			
<i>Einadia nutans</i> ssp. <i>nutans</i>	Climbing Saltbush			LC
<i>Enchylaena tomentosa</i> var.	Ruby Saltbush			
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	Ruby Saltbush			LC
<i>Enneapogon nigricans</i>	Black-head Grass			LC
<i>Enteromorpha compressa</i>				
<i>Erodium crinitum</i>	Blue Heron's-bill			LC
<i>Eucalyptus diversifolia</i> ssp. <i>diversifolia</i>	Coastal White Mallee			RA
<i>Eucalyptus fasciculosa</i> [^]	Pink Gum		R	NT
<i>Eucalyptus incrassata</i> [^]	Ridge-fruited Mallee			NT
<i>Eucalyptus stotei</i> [^]	Scarlet Pear Gum			
<i>Eutaxia microphylla</i>	Common Eutaxia			LC
<i>Feldmannia irregularis</i>				
<i>Ficinia nodosa</i>	Knobby Club-rush			LC
<i>Gahnia deusta</i>	Limestone Saw-sedge			NT
<i>Gahnia lanigera</i>	Black Grass Saw-sedge			LC
<i>Galium migrans</i> ssp. <i>migrans</i>	Loose Bedstraw			RA
<i>Geranium retrorsum</i>	Grassland Geranium			LC
<i>Glycine rubiginosa</i>	Twining Glycine			NT
<i>Gonocarpus mezianus</i>	Broad-leaf Raspwort			LC
<i>Goodenia amplexans</i>	Clasping Goodenia			NT
<i>Hakea rugosa</i>	Dwarf Hakea			NT
<i>Halipylon roseum</i>				
<i>Halopteris paniculata</i>				
<i>Halopteris pseudospicata</i>				
<i>Homoeostrichus sinclairii</i>				
<i>Hormosira banksii</i> f. <i>banksii</i>				
<i>Kennedia prostrata</i>	Scarlet Runner			LC
<i>Kunzea pomifera</i>	Muntries			RA
<i>Lachnagrostis billardierei</i> ssp. <i>billardierei</i>	Coast Blown-grass			RA
<i>Lachnagrostis filiformis</i>	Common Blown-grass			LC
<i>Leiocarpa supina</i>	Coast Plover-daisy			RA
<i>Lepidosperma canescens</i>	Hoary Rapier-sedge			LC
<i>Lepidosperma carphoides</i>	Black Rapier-sedge			LC
<i>Lepidosperma curtisiae</i>	Little Sword-sedge			NT

Species	Common Name	EPBC Status	NPW Act Status	Subregional Status*
<i>Lepidosperma gladiatum</i>	Coast Sword-sedge			NT
<i>Lepidosperma</i> spp.^				
<i>Leucophyta brownii</i>	Coast Cushion Bush			LC
<i>Leucopogon parviflorus</i>	Coast Beard-heath			LC
<i>Lobelia gibbosa</i>	Tall Lobelia			NT
<i>Lobospira bicuspidata</i>				
<i>Lomandra collina</i>	Sand Mat-rush			NT
<i>Lomandra densiflora</i>	Soft Tussock Mat-rush			LC
<i>Lomandra effusa</i>	Scented Mat-rush			LC
<i>Lomandra multiflora</i> ssp. <i>dura</i>	Hard Mat-rush			LC
<i>Lomandra nana</i>	Small Mat-rush			LC
<i>Maireana brevifolia</i> ^	Short-leaf Bluebush			LC
<i>Maireana enchylaenoides</i>	Wingless Fissure-plant			LC
<i>Malva preissiana</i>	Australian Hollyhock			
<i>Melaleuca decussata</i> ^	Totem-poles			LC
<i>Melaleuca</i> spp.^				
<i>Muehlenbeckia gunnii</i>	Coastal Climbing Lignum			LC
<i>Myoporum insulare</i>	Common Boobialla			LC
<i>Myoporum petiolatum</i>	Sticky Boobialla			
<i>Nicotiana maritima</i>	Coast Tobacco			NT
<i>Nitraria billardierei</i>	Nitre-bush			RA
<i>Nizyenia australis</i>				
<i>Nothelia anomala</i>				
<i>Olearia axillaris</i>	Coast Daisy-bush			LC
<i>Olearia lanuginosa</i>	Woolly Daisy-bush			VU
<i>Olearia ramulosa</i>	Twiggy Daisy-bush			LC
<i>Oxalis perennans</i>	Native Sorrel			LC
<i>Pachydictyon paniculatum</i>				
<i>Pelargonium australe</i>	Austral Stork's-bill			NT
<i>Phyllota pleurandroides</i>	Heathy Phyllota			NT
<i>Picris angustifolia</i> ssp. <i>angustifolia</i>	Coast Picris			RA
<i>Pimelea serpyllifolia</i> ssp. <i>serpyllifolia</i>	Thyme Riceflower			LC
<i>Plantago varia</i>	Variable Plantain			NT
<i>Plocamium cartilagineum</i>				
<i>Poa poiformis</i> var. <i>poiformis</i>	Coast Tussock-grass			LC
<i>Polycerea nigrescens</i>				
<i>Pomaderris paniculosa</i> ssp. <i>paniculosa</i>	Mallee Pomaderris			NT
<i>Puccinellia stricta</i>	Australian Saltmarsh-grass			NT
<i>Pultenaea pedunculata</i>	Matted Bush-pea			NT
<i>Rhagodia candolleana</i> ssp.	Sea-berry Saltbush			
<i>Rhagodia candolleana</i> ssp. <i>candolleana</i>	Sea-berry Saltbush			LC
<i>Rhagodia parabolica</i> ^	Mealy Saltbush			RA
<i>Rinzia orientalis</i>	Desert Heath-myrtle			RA
<i>Rumex dumosus</i>	Wiry Dock		R	EN
<i>Rytidosperma caespitosum</i>	Common Wallaby-grass			LC
<i>Rytidosperma</i> spp.^	Wallaby Grass			
<i>Sagina maritima</i>	Sea Pearlwort			LC
<i>Samolus repens</i>	Creeping Brookweed			NT
<i>Santalum acuminatum</i>	Quandong			RA

Species	Common Name	EPBC Status	NPW Act Status	Subregional Status*
<i>Sargassum decipiens</i>				
<i>Sargassum heteromorphum</i>				
<i>Sargassum lacerifolium</i>				
<i>Sargassum linearifolium</i>				
<i>Sargassum varians</i>				
<i>Sargassum verruculosum</i>				
<i>Scleranthus pungens</i>	Prickly Knawel			RA
<i>Scytosiphon lomentaria</i>				
<i>Scytothalia dorycarpa</i>				
<i>Seirococcus axillaris</i>				
<i>Senecio odoratus</i>	Scented Groundsel			
<i>Senecio pinnatifolius</i> group	Variable Groundsel			
<i>Senecio pinnatifolius</i> var. <i>maritimus</i>	Coast Groundsel			RA
<i>Setaria constricta</i>	Knotty-butt Paspalidium			NT
<i>Siloxerus multiflorus</i>	Small Wrinklewort			LC
<i>Solenogyne dominii</i>	Smooth Solenogyne			NT
<i>Solieria robusta</i>				
<i>Spergularia marina</i>	Salt Sand-spurrey			
<i>Sporochnus comosus</i>				
<i>Spyridia squalida</i>				
<i>Spyridium coactilifolium</i>	Butterfly Spyridium	VU	V	VU
<i>Stackhousia monogyna</i> [^]	Creamy Candles			
<i>Stenanthemum leucophractum</i>	White Cryptandra			RA
<i>Suringariella harveyana</i>				
<i>Taonia australasica</i>				
<i>Tetragonia implexicoma</i>	Bower Spinach			LC
<i>Themeda triandra</i>	Kangaroo Grass			LC
<i>Threlkeldia diffusa</i>	Coast Bonefruit			NT
<i>Tinocladia australis</i>				
<i>Wahlenbergia littorcola</i>	Coast Bluebell			
<i>Wahlenbergia luteola</i>	Yellow-wash Bluebell			NT
<i>Xanthoparmelia conspersa</i>				
<i>Xanthorrhoea semiplana</i> ssp. <i>semiplana</i>	Yacca			LC
<i>Zonaria angustata</i>				

[^] denotes records from technical updates, review of publications and local input

*See Appendices for subregional map

Regional Conservation status, Mount Lofty Ranges IBRA (Interim Biogeographical Regionalisation for Australia) subregion (Gillam & Urban (2014). Regional Species Conservation Assessment Project, Phase 1 Report - Regional Species Status Assessments, Adelaide and Mount Lofty Ranges NRM Region. DEWNR: SA)

RE = Regionally Extinct CR = Critically Endangered EN = Endangered
VU = Vulnerable RA = Rare NT = Near Threatened
LC = Least Concern DD = Data Deficient NE = Not Evaluated

All Introduced Flora in cell

Species	Common Name	Red Alert Weeds	Declared Weeds	WONS
<i>Acacia cyclops</i> *	Western Coastal Wattle	IC		
<i>Acacia saligna</i> *	Golden Wreath Wattle	HP		
<i>Agonis flexuosa</i> *	Willow Myrtle			
<i>Aira cupaniana</i>	Small Hair-grass			
<i>Aizoon pubescens</i>	Coastal Galenia	IC		
<i>Arctotheca calendula</i>	Cape Weed	HP		
<i>Artemisia sp.*</i>	Wormwood			
<i>Asparagus asparagoides</i> *	Bridal creeper		Yes	Yes
<i>Asparagus asparagoides f. asparagoides</i>	Bridal Creeper (form)	IC	Yes	Yes
<i>Asparagus declinatus</i> *	Bridal Veil	IC	Yes	Yes
<i>Asphodelus fistulosus</i>	Onion Weed	HP		
<i>Atriplex prostrata</i>	Creeping Saltbush			
<i>Avena barbata</i>	Bearded Oat			
<i>Avena sp.*</i>				
<i>Briza maxima</i>	Large Quaking-grass			
<i>Briza minor</i>	Lesser Quaking-grass			
<i>Bromus diandrus</i>	Great Brome			
<i>Bromus hordeaceus ssp. hordeaceus</i>	Soft Brome			
<i>Cakile maritima ssp. maritima</i>	Two-horned Sea Rocket			
<i>Callistemon spp.*</i>	Bottlebrush sp.			
<i>Carpobrotus edulis ssp. edulis</i>	Hottentot Fig	HP		
<i>Casuarina glauca</i> *	Grey Bullock	IC	Yes	
<i>Casuarina obesa</i> *	Swamp Sheoak		Yes	
<i>Cenchrus clandestinus</i>	Kikuyu	HP		
<i>Cenchrus longisetus</i>	Feather-top	HP		
<i>Centaurium erythraea</i>	Common Centaury			
<i>Chenopodium album</i>	Fat Hen			
<i>Chrysanthemoides monilifera ssp. Monilifera</i> *	Boneseed	IC	Yes	Yes
<i>Coprosma repens</i>	New Zealand Mirror-bush	IC	Yes	
<i>Cupressus sp.*</i>	Cypress			
<i>Cyperus eragrostis</i>	Drain Flat-sedge	HP		
<i>Diplotaxis muralis</i>	Wall Rocket			
<i>Echium plantagineum</i>	Salvation Jane		Yes	
<i>Ehrharta calycina</i>	Perennial Veldt Grass	HP		
<i>Ehrharta longiflora</i>	Annual Veldt Grass			
<i>Erigeron sumatrensis</i>	Tall Fleabane			
<i>Eucalyptus gomphocephala</i> *	Tuart			
<i>Eucalyptus lehmannii</i> *	Busy Yate			
<i>Eucalyptus platypus</i> *	Maalok			
<i>Euphorbia paralias</i>	Sea Spurge	HP		
<i>Euphorbia terracina</i>	False Caper	HP	Yes	
<i>Gaudium laevigatum</i>	Coast Tea-tree		Yes	
<i>Gomphocarpus cancellatus</i>	Broad-leaf Cotton-bush	HP		
<i>Hordeum leporinum</i>	Wall Barley-grass			
<i>Hornungia procumbens</i>	Oval Purse			

Species	Common Name	Red Alert Weeds	Declared Weeds	WONS
<i>Hypericum perforatum ssp. veronense</i>	St John's Wort			
<i>Hypochaeris glabra</i>	Smooth Cat's Ear			
<i>Hypochaeris radicata</i>	Rough Cat's Ear			
<i>Lactuca serriola f.</i>	Prickly Lettuce			
<i>Lagurus ovatus</i>	Hare's Tail Grass			
<i>Lolium perenne</i>	Perennial Ryegrass			
<i>Lycium ferocissimum</i>	African Boxthorn	IC	Yes	Yes
<i>Lysimachia arvensis</i>	Pimpernel			
<i>Malva arborea*</i>	Tree Mallow	HP		
<i>Malva parviflora</i>	Small-flower Marshmallow			
<i>Marrubium vulgare</i>	Horehound	IC	Yes	
<i>Medicago polymorpha</i>	Burr-medic			
<i>Medicago praecox</i>	Small-leaf Burr-medic			
<i>Melaleuca armillaris ssp. armillaris*</i>	Bracelet Honey-myrtle	HP		
<i>Melaleuca nesophila*</i>	Showy Honey Myrtle			
<i>Melilotus indicus</i>	King Island Melilot			
<i>Moraea flaccida*</i>	One-leaf Cape Tulip	IC	Yes	
<i>Oenothera stricta ssp. stricta</i>	Common Evening Primrose			
<i>Olea europaea ssp. europaea</i>	Olive	IC		
<i>Parapholis incurva</i>	Curly Ryegrass			
<i>Paspalum distichum</i>	Water Couch			
<i>Petrorhagia nanteuillii</i>				
<i>Phalaris aquatica</i>	Phalaris			
<i>Pinus radiata*</i>	Radiata Pine	IC		
<i>Plantago coronopus ssp. coronopus</i>	Bucks-horn Plantain			
<i>Plantago lanceolata var. lanceolata</i>	Ribwort			
<i>Polygala myrtifolia*</i>	Myrtle-leaf Milkwort	IC	Yes	
<i>Polygonum aviculare</i>	Wireweed			
<i>Reichardia tingitana</i>	False Sowthistle			
<i>Rhamnus alaternus*</i>	Blowfly Bush	IC	Yes	
<i>Rumex pulcher ssp. pulcher</i>	Fiddle Dock			
<i>Sherardia arvensis</i>	Field Madder			
<i>Silene gallica var. gallica</i>	French Catchfly			
<i>Sixalix atropurpurea</i>	Pincushion	IC		
<i>Solanum linnaeanum</i>	Apple Of Sodom	HP	Yes	
<i>Solanum nigrum</i>	Black Nightshade			
<i>Sonchus asper</i>	Rough Sow-thistle			
<i>Sonchus oleraceus</i>	Common Sow-thistle			
<i>Thinopyrum junceiforme*</i>	Sea Wheat-grass	IC		
<i>Trifolium arvense var. arvense</i>	Hare's-foot Clover			
<i>Urospermum picroides</i>	False Hawkbit			

WONS = Weeds of National Significance.

Declared = Declared under the Landscape South Australia Act 2019. Pest plants that are a significant threat to agriculture, the natural environment and public health and safety are called declared plants. Land owners have a legal responsibility to manage these plants.

Red Alert = Weed Threat Level of four or greater out of nine. Plants in this categorised are either designated as requiring immediate control (IC – 6-9) or as a high priority for control (HP – 4-5). See Department for Environment and Water (2024)

Reference – Department for Environment and Water (2024). Threatening Processes - Environmental and Priority Weed Species. Southern Fleurieu Coastal Action Plan Review 2024. Prepared by SA Herbarium

FAUNA Summary

# Fauna in cell	190
# Native Fauna in cell	76
# Introduced Fauna in cell	14
# Conservation Rated Fauna in cell	21 (8 national, 20 state)

Conservation Rated Fauna				
Species	Common Name	Class	EPBC Act Status	NPW Act Status
<i>Actitis hypoleucos</i> [^]	Common Sandpiper	AVES		R
<i>Falco peregrinus macropus</i> [^]	Peregrine Falcon	AVES		R
<i>Falcunculus frontatus frontatus</i> [^]	Eastern Shrike-tit	AVES		R
<i>Haematopus fuliginosus fuliginosus</i>	Sooty Oystercatcher	AVES		R
<i>Haliaeetus leucogaster</i> [^]	White-bellied Sea Eagle	AVES		E
<i>Macronectes giganteus</i>	Southern Giant Petrel	AVES	EN	V
<i>Melithreptus gularis gularis</i> [^]	Black-chinned Honeyeater	AVES		V
<i>Neophema elegans elegans</i>	Elegant Parrot	AVES		R
<i>Pandion haliaetus cristatus</i> [^]	Eastern Osprey	AVES		E
<i>Platycercus elegans</i>	Crimson Rosella	AVES	ssp	
<i>Stercorarius antarcticus lonnbergi</i>	Brown Skua	AVES		V
<i>Sternula nereis nereis</i>	Fairy Tern	AVES	VU	E
<i>Thalassarche carteri</i>	Indian Yellow-nosed Albatross	AVES	VU	E
<i>Thalassarche cauta cauta</i>	Shy Albatross	AVES	VU	V
<i>Thalassarche chrysostoma</i>	Grey-headed Albatross	AVES	EN	V
<i>Zanda funerea whiteae</i> [^]	Yellow-tailed Black Cockatoo	AVES		V
<i>Pteropus poliocephalus</i> [^]	Grey-headed Flying-fox	MAM	VU	R
<i>Tachyglossus aculeatus</i> [^]	Short-beaked Echidna	MAM	ssp	ssp
<i>Trichosurus vulpecula</i> [^]	Common Brushtail Possum	MAM		R
<i>Egernia cunninghami</i> [^]	Cunningham's Skink	REP		E
<i>Varanus rosenbergi</i>	Heath Goanna	REP		V

All Native Fauna in cell

Species Name	Common Name	Class	EPBC Act Status	NPW Act Status	Subregional Status
<i>Acanthiza chrysorrhoa</i>	Yellow-rumped Thornbill	AVES			LC
<i>Acanthiza lineata clelandi</i>	Striated Thornbill (MLR, SE)	AVES			
<i>Actitis hypoleucos</i> [^]	Common Sandpiper	AVES		R	RA
<i>Anas superciliosa</i>	Pacific Black Duck	AVES			LC
<i>Anthochaera carunculata</i>	Red Wattlebird	AVES			LC
<i>Anthochaera chrysoptera chrysoptera</i>	Little Wattlebird (mainland SA)	AVES			
<i>Ardenna tenuirostris</i>	Short-tailed Shearwater	AVES			
<i>Chroicocephalus novaehollandiae novaehollandiae</i>	Silver Gull	AVES			LC
<i>Egretta novaehollandiae</i>	White-faced Heron	AVES			LC
<i>Egretta sacra</i> [^]	Eastern Reef Egret	AVES			
<i>Elanus axillaris</i>	Black-shouldered Kite	AVES			LC
<i>Eolophus roseicapilla</i>	Galah	AVES			LC
<i>Falco cenchroides cenchroides</i>	Nankeen Kestrel	AVES			LC
<i>Falco peregrinus macropus</i> [^]	Peregrine Falcon	AVES		R	RA
<i>Falcunculus frontatus frontatus</i> [^]	Eastern Shrike-tit	AVES		R	
<i>Gavicalis virescens</i>	Singing Honeyeater	AVES			LC

Species Name	Common Name	Class	EPBC Act Status	NPW Act Status	Subregional Status
<i>Grallina cyanoleuca cyanoleuca</i>	Magpie	AVES			LC
<i>Gymnorhina tibicen</i>	Australian Magpie	AVES			LC
<i>Haematopus fuliginosus fuliginosus</i>	Sooty Oystercatcher	AVES		R	VU
<i>Haliaeetus leucogaster</i> [^]	White-bellied Sea Eagle	AVES		E	EN
<i>Hirundo neoxena neoxena</i>	Welcome Swallow	AVES			LC
<i>Hydroprogne caspia</i>	Caspian Tern	AVES			LC
<i>Larus pacificus georgii</i>	Pacific Gull	AVES			LC
<i>Larus spp.</i> [^]	Gulls	AVES			
<i>Macronectes giganteus</i>	Southern Giant Petrel	AVES	EN	V	
<i>Malurus cyaneus</i>	Superb Fairywren	AVES			LC
<i>Melithreptus gularis gularis</i> [^]	Black-chinned Honeyeater	AVES		V	
<i>Microcarbo melanoleucos melanoleucos</i>	Little Pied Cormorant	AVES			LC
<i>Morus serrator</i>	Australasian Gannet	AVES			NT
<i>Neophema elegans elegans</i>	Elegant Parrot	AVES		R	RA
<i>Ocyphaps lophotes lophotes</i>	Crested Pigeon	AVES			LC
<i>Pandion haliaeetus cristatus</i> [^]	Eastern Osprey	AVES		E	
<i>Pelecanus conspicillatus</i>	Australian Pelican	AVES			LC
<i>Phalacrocorax fuscescens</i>	Black-faced Cormorant	AVES			NT
<i>Phalacrocorax sulcirostris</i>	Little Black Cormorant	AVES			LC
<i>Phalacrocorax varius hypoleucos</i>	Australian Pied Cormorant	AVES			LC
<i>Phylidonyris novaehollandiae</i>	New Holland Honeyeater	AVES			LC
<i>Platycercus elegans</i>	Crimson Rosella	AVES	ssp		LC
<i>Psephotus haematonotus</i>	Red-rumped Parrot	AVES			LC
<i>Puffinus gavia</i>	Fluttering Shearwater	AVES			LC
<i>Rhipidura leucophrys leucophrys</i>	Willie Wagtail	AVES			LC
<i>Stercorarius antarcticus lonnbergi</i>	Brown Skua	AVES		V	
<i>Stercorarius parasiticus</i>	Parasitic Jaeger (Arctic Jaeger)	AVES			
<i>Sterna spp.</i> [^]	Terns	AVES			
<i>Sternula nereis nereis</i>	Fairy Tern	AVES	VU	E	EN
<i>Thalassarche carteri</i>	Indian Yellow-nosed Albatross	AVES	VU	E	
<i>Thalassarche cauta cauta</i>	Shy Albatross	AVES	VU	V	
<i>Thalassarche chrysostoma</i>	Grey-headed Albatross	AVES	EN	V	
<i>Thalasseus bergii cristatus</i>	Greater Crested Tern	AVES			LC
<i>Trichoglossus moluccanus moluccanus</i>	Rainbow Lorikeet	AVES			LC
<i>Vanellus miles</i>	Masked Lapwing	AVES			LC
<i>Zanda funerea whiteae</i> [^]	Yellow-tailed Black Cockatoo	AVES		V	RA
<i>Danaus petilia</i> [^]	Lesser Wanderer	INV			
<i>Danaus plexippus plexippus</i> [^]	Monarch	INV			
<i>Delias aganippe</i> [^]	Wood White	INV			
<i>Heteronympha merope merope</i> [^]	Common Brown	INV			
<i>Junonia villida calybe</i> [^]	Meadow Argus	INV			
<i>Lampides boeticus</i> [^]	Long-tailed Pea-blue	INV			
<i>Nacaduba biocellata biocellata</i> [^]	Two-spotted Line-blue	INV			
<i>Ocybadistes walkeri hypochlora</i> [^]	Southern Grass-dart	INV			
<i>Pieris rapae rapae</i> [^]	Cabbage White	INV			
<i>Taractrocer papyria papyria</i> [^]	White-banded Grass-dart	INV			
<i>Theclines thes miskini miskini</i> [^]	Wattle Blue	INV			
<i>Theclines thes serpentatus serpentatus</i> [^]	Salt-bush Blue	INV			
<i>Vanessa itea</i> [^]	Australian Admiral	INV			
<i>Vanessa kershawi</i> [^]	Australian Painted Lady	INV			
<i>Zizina otis labradus</i> [^]	Common Grass-blue	INV			
<i>Hydromys chrysogaster</i> [^]	Water Rat	MAM			NT
<i>Macropus fuliginosus</i> [^]	Western Grey Kangaroo	MAM			LC
<i>Pseudocheirus peregrinus</i> [^]	Common Ringtail Possum	MAM			
<i>Pteropus poliocephalus</i> [^]	Grey-headed Flying-fox	MAM	VU	R	

Species Name	Common Name	Class	EPBC Act Status	NPW Act Status	Subregional Status
<i>Rattus fuscipes</i> [^]	Bush Rat	MAM			
<i>Tachyglossus aculeatus</i> [^]	Short-beaked Echidna	MAM	ssp	ssp	
<i>Trichosurus vulpecula</i> [^]	Common Brushtail Possum	MAM		R	
<i>Egernia cunninghami</i> [^]	Cunningham's Skink	REP		E	
<i>Varanus rosenbergi</i>	Heath Goanna	REP		V	

Class: **ACT** = Actinopteri, **AMP** = Amphibia, **AVES** = Aves, **INV** = Invertebrates, **MAM** = Mammalia, **REP**= Reptilia

All Introduced Fauna in cell

Species	Common Name
<i>Rattus rattus</i> [^]	Black Rat (Ship Rat, Roof Rat)
<i>Lepus capensis</i> [^]	Brown Hare
<i>Rattus norvegicus</i> [^]	Brown Rat
<i>Turdus merula merula</i>	Common Blackbird
<i>Acridotheres tristis</i> [^]	Common Myna
<i>Sturnus vulgaris vulgaris</i>	Common Starling
<i>Felis catus</i> [^]	Domestic Cat (Feral Cat)
<i>Carduelis carduelis britannica</i>	European Goldfinch
<i>Columba livia</i>	Feral Pigeon
<i>Vulpes vulpes</i> [^]	Fox (Red Fox)
<i>Capra hircus</i> [^]	Goat
<i>Mus musculus</i> [^]	House Mouse
<i>Passer domesticus domesticus</i>	House Sparrow
<i>Oryctolagus cuniculus</i> [^]	Rabbit (European Rabbit)



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